

Sub 27  
B1  
(Amended) A quartz thin film made by depositing at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane on a substrate under atmospheric pressure.

2. (Amended) A quartz film as claimed in claim 1, which is a quartz epitaxial thin film.

Please add the following claims:

Sub 3  
8. The article of Claim 2 wherein said epitaxial layer is characterized by an X-ray diffraction profile exhibiting a diffraction peak at  $2\theta=50.6^\circ$ .

9. The article of Claim 2, which further comprises a third layer which is a buffer layer which is disposed between said substrate and said crystal thin film.

Sub 4  
10. The article of Claim 9, wherein the buffer layer is GaN or ZnO

11. The article of Claim 9, wherein the buffer layer comprises amorphous material

B2  
12. The article of Claim 9, wherein the buffer layer comprises amorphous crystal

13. An article of manufacture selected from the group consisting of vibrators, oscillator, high frequency filter surface acoustic wave element, optical waveguide, semiconductor substrate wherein the manufactured article comprises the article of Claim 1.

Sub 5  
14. An article comprising a quartz thin film grown on a substrate under atmospheric pressure, wherein the quartz thin film comprises a deposit formed from at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane; and  
wherein the substrate comprises a material selected from the group consisting of sapphire, silicon, and GaAs --

15. The article of Claim 14, which further comprises a third layer which is a buffer layer which is disposed between said substrate and said crystal thin film.

16. The article of Claim 15, wherein the buffer layer is GaN or ZnO.

17. The article of Claim 16, wherein the buffer layer comprise amorphous material.

18. A article of Claim 14, wherein the substrate comprises sapphire.

19. The article of Claim 14, wherein said epitaxial layer is characterized by an X-ray diffraction profile exhibiting a diffraction peak at  $2\theta=50.6^\circ$ .

20. An article of manufacture selected from the group consisting of vibrators, oscillator, high frequency filter surface acoustic wave element, optical waveguide, semiconductor substrate wherein the manufactured article comprises the article of Claim 14. --

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### REMARKS

Reconsideration of the outstanding Office Action is respectfully solicited. (A marked-up version of amendments of Claims 1 and 2 is attached.)

As noted to the Examiner [during a phone interview on December 30, 2002], this substitute paper is filed to present the clean copy of the SUBSTITUTE SPECIFICATION. Although the file of the undersigned suggested that such a paper was filed, our client indicated non-receipt of the same. The Examiner also indicated that he had not received the clean copy. Accordingly, it is presented herewith. The undersigned apologizes for the inconvenience; the explanation is simply that December 5, 2002 was a snow day in Washington; and our office was working with a skeleton support staff. The Examiner is further advised that on December 27 the DECLARATION of Hisashi Inoguchi was filed in the Patent Office concurrently with